

WHAT IS CLAIMED IS:

1. A molding composition comprising:
an inorganic component including a glass or ceramic powder;
an organic binder component capable of being hardened by exposure to heat, light, or an electron beam; and
a debinding catalyst of the organic binder component, the debinding catalyst comprising a transition metal oxide, salt, or complex,
wherein the molding composition has a sintering temperature that is at most about 500°C, and wherein the presence of the debinding catalyst in the molding composition enables the use of lower sintering temperature ceramic formulations.
2. The molding composition of claim 1, wherein the sintering temperature is at most about 460°C.
3. The molding composition of claim 1, wherein the sintering temperature of the molding composition is lower by about 50°C or more in the presence of the debinding catalyst than for an otherwise identical molding composition without the debinding catalyst.
4. The molding composition of claim 1, wherein the debinding catalyst comprises an oxide, salt, or complex of Cr, Mn, Fe, Co, Ni, Cu, Zn, In, Sn, Ru, Rh, Pd, Ag, Ir, Pt, Au, or Ce.
5. The molding composition of claim 1, wherein the debinding catalyst comprises an oxide, salt, or complex of Cu.
6. The molding composition of claim 1, wherein the debinding catalyst comprises Cu₂O, CuSO₄, Co(NO₃), or Cu(OAc)₂.
7. The molding composition of claim 1, further comprising a silane coupling agent.

8. The molding composition of claim 1 having a viscosity of about 1×10^3 to 1×10^5 centipoise.

5 9. The molding composition of claim 1, wherein the inorganic component is present in an amount of at least about 40% by volume, the organic binder component is present in an amount of at most about 60% by volume, and the debinding catalyst is present in an amount of at most about 5% by volume.

10 10. A plasma display panel, comprising a glass panel having a plurality of barrier ribs formed thereon, the barrier ribs formed using a molding composition comprising an inorganic component including a glass or ceramic powder, an organic binder component capable of being hardened by exposure to heat, light, or an electron beam, and a debinding catalyst of the organic binder component, the debinding catalyst comprising a transition metal oxide, salt, or complex, wherein the molding composition has a sintering temperature that is at most about 500°C, and wherein the presence of the debinding catalyst in the molding composition enables the use of lower sintering temperature ceramic formulations.

15 20 11. The plasma display panel of claim 10, wherein the glass panel comprises soda-lime glass.

25 12. The plasma display panel of claim 10, wherein the sintering temperature of the molding composition is at most about 460°C.

30 13. The plasma display panel of claim 10, wherein the sintering temperature of the molding composition is lower by about 50°C or more in the presence of the debinding catalyst than for an otherwise identical molding composition without the debinding catalyst.

14. The plasma display panel of claim 10, wherein the debinding catalyst comprises an oxide, salt, or complex of Cr, Mn, Fe, Co, Ni, Cu, Zn, In, Sn, Ru, Rh, Pd, Ag, Ir, Pt, Au, or Ce.

5 15. The plasma display panel of claim 10, wherein the debinding catalyst comprises an oxide, salt, or complex of Cu.

16. The plasma display panel of claim 10, wherein the debinding catalyst comprises Cu_2O , CuSO_4 , $\text{Co}(\text{NO}_3)_2$, or $\text{Cu}(\text{OAc})_2$.

10 17. The plasma display panel of claim 10, wherein the molding composition further comprises a silane coupling agent.

15 18. The plasma display panel of claim 10, wherein the molding composition has a viscosity of about 1×10^3 to 1×10^5 centipoise.

20 19. The plasma display panel of claim 10, wherein the inorganic component is present in an amount of at least about 40% by volume, the organic binder component is present in an amount of at most about 60% by volume, and the debinding catalyst is present in an amount of at most about 5% by volume.

20. A method of making barrier ribs for a plasma display panel comprising the steps of:

25 placing a molding composition between a mold having a plurality of concave portions and a glass panel, the molding composition comprising an inorganic component including a glass or ceramic powder, an organic binder component capable of being hardened by exposure to heat, light, or an electron beam, and a debinding catalyst of the organic binder component, the debinding catalyst comprising a transition metal oxide, salt, or complex, wherein the molding composition has a sintering temperature that is at
30 most about 500°C , and wherein the presence of the debinding catalyst in the molding composition enables the use of lower sintering temperature ceramic formulations;

hardening the molding composition between the mold and the glass panel,
thereby forming precursor barrier ribs;

removing the mold from the precursor barrier ribs; and

5 sintering the precursor barrier ribs on the glass panel by heating to a
temperature of about 400°C to 500°C.

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